ELSEVIER

Volume 232, Numbers 1–2, 1 January 1996

Journal of ALLOYS AND COMPOUNDS

Contents

Letters

The X-ray investigation of the ternary Nd–Ag–Si system L1
O.V. Zaplatynsky, Yu.M. Prots', P.S. Salamakha, L.O. Muratova, O.I. Bodak (L'viv, Ukraine)

Anomalous temperature dependence of the 4f quadrupole moment of the Yb^{3+} ion L5
R.J. Radwański (Kraków, Poland)

^{119}Sn Mössbauer study of the compound UAuSn L8
R. Kruk, R. Kmieć, K. Łątka, K. Tomala (Kraków, Poland), R. Troć, V.H. Tran (Wrocław, Poland)

The disproportionated structure of Sm_2Fe_{17} observed by high resolution scanning electron microscopy L12
J.C. Clarke, O. Gutfleisch, S.A. Sinan, I.R. Harris (Birmingham, UK)

Hydriding properties of the Mg_2Ni–H system synthesized by reactive mechanical grinding L16
S. Orimo, H. Fujii (Higashi-Hiroshima, Japan)

Gibbs energy of formation of La_2CuO_4 using a calcium fluoride solid electrolyte galvanic cell L20
S. Raghavan (Madras, India)

S-HDDR induced cavitation in NdFeB L22
A.J. Williams, O. Gutfleisch, I.R. Harris (Birmingham, UK)

Review

On the coordination of $ThCr_2Si_2$ ($BaAl_4$)-type compounds within the field of free parameters 1
G. Just, P. Paufler (Dresden, Germany)

Chemistry

Lattice parameter and electronic properties of the solid solution $CoSb_2$–$CoTe_2$ 26
P. Terzieff, H. Schicketanz (Wien, Austria)

Electrical properties and chemical composition of VCr_2S_4 32
M.A. Boutbila, J. Rasneur (Amiens, France)

Structure and conductivity of $RhVO_4$. Relationship between the $MM'O_4$ oxides derived from the rutile-type 36
J. Isasi, M.L. López, M.L. Veiga, C. Pico (Madrid, Spain)

Substitution of Co into the system $YBaFeCuO_{5+\delta}$ 43
T. Rentschler (Hamburg, Germany)

Synthesis of ZrF_4–BaF_2–LnF_3 glasses (Ln = La, Ce, Pr, Nd or Eu) by combined processes of sol–gel and fluorination . . 53
A. Konishi, R. Kanno, Y. Kawamoto (Kobe, Japan)

The luminescence of Sb^{3+} in LaOCl 60
L.I. van Steensel, G. Blasse (Utrecht, The Netherlands)

Physics

Investigation of $Cu_xGa_yCr_zSe_4$ single crystals 63
A. Winiarski, I. Okonska-Kozłowska, J. Heimann (Katowice, Poland), M. Neumann (Osnabrück, Germany)

Investigation of the transitions in UPd_3 67
M. Lenkewitz, S. Corsépius, E.-W. Scheidt, G.R. Stewart (Augsburg, Germany)

Equiatomic ternary lanthanum–transition metal–tin phases: structural and electrical results 71
F. Canepa, S. Cirafici (Genova, Italy)

Elsevier Science S.A.

The effect of aluminium on the structural and hydrogen sorption properties of $ErNi_5$ 79
B. Šorgić, A. Drašner, Ž. Blažina (Zagreb, Croatia)

PMR measurements on $(Ni_{1-x}Cu_x)_{0.5}Zr_{0.5}$–$H_y$ amorphous alloys 84
K. Tompa, P. Bánki, C. Hargitai, G. Lasanda, L.K. Varga (Budapest, Hungary)

A ^{155}Gd Mössbauer spectral study and magnetic properties of $Gd_2Fe_{17-x}Ga_x$ compounds 90
D.P. Middleton (Eindhoven and Leiden, Netherlands), D.A. van de Straat, R.C. Thiel (Leiden, Netherlands), K.H.J. Buschow (Amsterdam, Netherlands)

X-ray diffraction and Mössbauer studies of CeT_2Sn_2 (T = Cu, Pd and Pt) 95
E. Lidström, A.M. Ghandour, L. Häggström, Y. Andersson (Uppsala, Sweden)

Mössbauer effect evidence of spin reorientation in $(Er_{1-x}Ce_x)_2Fe_{14}B$ intermetallic compounds 101
J.J. Bara, B.F. Bogacz, A.T. Pędziwiatr (Cracow, Poland)

X-ray diffraction and extended X-ray absorption fine-structure study of RMn_2 hydrides (R = Y, Gd or Dy) 107
J. Przewoźnik, V. Paul-Boncour, M. Latroche, A. Percheron-Guégan (Meudon, France)

Localization of 5f electrons in δ-plutonium. Evidence for the Kondo effect 119
S. Méot-Reymond (Bruyères-Le-Châtel, France), J.M. Fournier (Grenoble, France)

Ordered $LaGa_4$ and its relation to other structures in the Ga–La binary system 126
W.D. Kaplan (Haifa, Israel), G. Kimmel (Beer Sheva, Israel)

Magnetic study of the compounds RMn_2Ge_2 (R ≡ La–Sm, Gd) and $R_xY_{1-x}Mn_2Ge_2$ (R ≡ La, Lu; $0 < x < 1$) above room temperature 133
G. Venturini (Vandoeuvre les Nancy, France)

Characterisation of the ternary rare earth molybdenum germanides $RE_2Mo_3Ge_4$ 142
T. Le Bihan, H. Noël (Rennes, France), K. Hiebl, P. Rogl (Wien, Austria)

A time-of-flight powder neutron diffraction study of non-stoichiometry in barium iridate $BaIrO_{3-\delta}$ 147
A.V. Powell (Edinburgh, UK), P.D. Battle (Oxford, UK)

Magnetic properties and neutron diffraction of $TbMn_4Al_8$ 154
P. Schobinger-Papamantellos (Zürich, Switzerland), P. Fischer (Villingen, Switzerland), C.H. de Groot, F.R. de Boer, K.H.J. Buschow (Amsterdam, Netherlands)

On tetragonal M_2Au_2In and related compounds 160
F. Hulliger (Zürich, Switzerland)

The magnetic ordering of the novel compound $ErGe_3$ 165
P. Schobinger-Papamantellos (Zürich, Switzerland), G. André, J. Rodríguez-Carvajal (Gif-sur-Yvette, France), C.H. de Groot, K.H.J. Buschow (Amsterdam, Netherlands)

The crystal structure of Zr_2NiD_4 174
M.M. Elcombe (Menai, Australia), S.J. Campbell (Canberra, Australia), C.J. Howard (Menai, Australia), H.G. Büttner (Grenoble, France), F. Aubertin (Saarbrücken, Germany)

Crystal structure and magnetic behaviour of the ternary uranium and thorium–molybdenum chalcogenides UMo_6S_8, UMo_6Se_8 and $ThMo_6S_8$ 180
A. Daoudi (Rennes, France and Casablanca, Morocco), M. Potel, H. Noël (Rennes, France)

Materials Science

Preparation of TiB_2–B_4C composites by high pressure sintering 186
H. Itoh, K. Sugiura, H. Iwahara (Nagoya, Japan)

Hydrogen storage properties of $Ml_{1-x}Ca_xNi_5$ pseudobinary intermetallic compounds 192
X. Wang, C. Chen, C. Wang, Q. Wang (Hongzhou, People's Republic of China)

Self-discharge behaviour of sealed Ni–MH batteries using $MmNi_{3.3+x}Co_{0.7}Al_{1.0-x}$ anodes 197
J.-H. Lee, K.-Y. Lee, J.-Y. Lee (Taejon, South Korea)

Hydriding properties of the ternary Mm-based AB_5 alloys modified by surface treatment 204
F. Liu, S. Suda (Tokyo, Japan)

Hydriding behavior of F-treated Mg_2Ni at moderate conditions 212
F.-J. Liu, S. Suda (Tokyo, Japan)

Hydrogen absorption of Mg-based composites prepared by mechanical milling. Factors affecting its characteristics 218
H. Imamura, N. Sakasai, Y. Kajii (Ube, Japan)

Metastable phase formation during mechanical alloying of Al–Ge and Al–Si alloys 224
K. Chattopadhyay (Sendai, Japan and Bangalore, India), X.-M. Wang (Sendai, Japan), K. Aoki (Sendai and Hokkaido, Japan), T. Masumoto (Sendai, Japan)

Effects of Ni-substitution and F-treatment on the hydriding behaviors and microstructures of AB_2-compound $(Ti,Zr)(Mn,Cr)_2$ 232
F.-J. Liu, S. Suda (Tokyo, Japan), G. Sandrock (Ringwood, NJ, USA)

Synthesis of amorphous $Nd_{15}Fe_{77}B_8$ alloy powders by mechanical alloying 238
T. Harada, T. Kuji (Saitama, Japan)

Characterization of a boro-silicon oxynitride prepared by thermal nitridation of a polyborosiloxane 244
L. Bois, P. L'Haridon, Y. Laurent (Rennes, France), X. Gouin, P. Grange (Louvain-la-Neuve, Belgique), J.-F. Létard, M. Birot, J.-P. Pillot, J. Dunoguès (Talence, France)

Metallurgy

The effect of the lattice strains on the directional coarsening of γ' precipitates in Ni-based alloys 254
Y.Y. Qiu (Lisboa, Portugal)

The solidification behaviour of Mg–Al–rare earth alloys 264
L.Y. Wei (Luleå, Sweden), G.L. Dunlop (Queensland, Australia)

Isothermal section of the phase diagram of the ternary system Nd–Fe–Ni at 510 °C 269
L. Jingqi (Guangxi, People's Republic of China)

Synthesis and crystal structure refinement of cubic $Mg_{6.8}Y$ 271
F. Bonhomme, K. Yvon (Geneva, Switzerland)

Thermodynamic study of the dissolution of nitrogen in nitrogen-rich α-U_2N_{3+x} 274
H. Serizawa, K. Fukuda (Ibaraki-Ken, Japan), M. Katsura (Osaka, Japan)

Advances in the purification of niobium by solid state gettering with titanium 281
H. Safa, D. Moffat, B. Bonin, F. Koechlin (Gif sur Yvette, France)

RMX compounds formed by alkaline earths, europium and ytterbium. IV: ternary phases with M = Ag and X = Si, Ge, Sn, Pb 289
F. Merlo, M. Pani, M.L. Fornasini (Genova, Italy)

Phase equilibria at 1150 °C in the Co-rich alloys Sm–Co–Zr and structure of the 1:7 phase 296
S. Derkaoui (Agadir, Morocco), N. Valignat, C.H. Allibert (Saint Martin d'Hères, France)

The investigation of selected Np–Zr alloys by X-ray diffraction up to 700 °C 302
Y. Okamoto (Ibaraki-ken, Japan), R.G. Haire, J.K. Gibson (Oak Ridge, TN, USA), T. Ogawa (Ibaraki-ken, Japan)

Corrigendum 307

Author Index of Volume 232 309

Subject Index of Volume 232 311

The publisher encourages the submission of articles in electronic form thus saving time and avoiding rekeying errors. A leaflet describing our requirements is available from the publisher upon request.